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POSTAL CUSTOMER MIDLAND, TX

# FACTS ON TAP: CITY OF MIDLAND WATER SYSTEM

- The City of Midland treats and pumps an average of 15 million gallons per day in the winter months, and up to 45 million gallons per day in the summer months.
- The City of Midland uses about 90% lake water from the Colorado River Municipal Water District, and the remainder from city-owned wells.
- The City of Midland's distribution system consists of about 615 miles of water lines from 4 inches in diameter to 33 inches in diameter; approximately 2550 fire hydrants and over 9000 valves.
- In 1900, 25,000 people died from typhoid in the United States alone. Thanks to chlorine, typhoid deaths in the U.S. dropped to fewer than 20 in 1960. Chlorine has also helped wipe out dysentery and cholera.
- The City of Midland must regularly test for 103 contaminants.
- Installation of water saving fixtures and fixing leaks can result in a decrease of about 30% of water consumption.
- The average Midlander uses about 180 gallons of water per day; on average, 60% of that is used for outdoor watering. Indoor use typically breaks down as follows:



# The Drought Continues.

The anticipated rains over the last year just have not occurred and the water in the lakes that supply our water needs continues to diminish. Our water supplier, CRMWD, has informed us that if we do not receive sufficient rainfall before next summer, they will request that we severely restrict water used for irrigation (sprinkler systems, watering yards, trees, shrubs, etc.) next year. Restrictions on water use have not been mandated because the majority of our water comes from surface water sources, and if it is not used, a large amount is lost to evaporation. However, it is becoming imperative that each of us uses the available water wisely. We are providing the following tips to assist you in conserving our water supply.

- Water your yards during the cool part of the day; otherwise much of the water evaporates.
- Water only when needed and do not over-water. Soil can only absorb so much water, then it runs off. One and one half inches applied once a week in the summer will keep most grasses green.
- To avoid evaporation, select a sprinkler that disperses large drops of water and at a low angle.
- Select drought tolerant plants and condition the soil with mulch and compost.
- Fertilize lawns at least twice a year to stimulate the roots, but do not over-fertilize.
- Do not scalp your lawn. Taller grasses hold moisture better.
- Fix leaks immediately. Even a small leak wastes a lot of water.
- Only wash full loads when using your dishwasher.
- Use the lowest possible water level setting when washing clothes
- Install low flow shower heads and low water usage toilets to assist in indoor conservation.

# 2002 Midland Water Quality Report

Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

# Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water. *En Espanol* 

Este reporte incluye informacion importante sobre el agua para tomar. Si tiene preguntas o' discusiones sobre este reporte en espanol, favor de llamar al tel. (432) 685-7100 par hablar con una persona bilingue en espanol.

#### Where Do We Get Our Drinking Water?

Midland's drinking water comes from wells in Martin and Andrews Counties and Midland County and from three surface water sources managed by the Colorado River Municipal Water District (CRMWD). The surface water sources are Lake J.B. Thomas near Snyder; E.V. Spence Reservoir near Robert Lee; and Lake Ivie near Ballinger. Surface water arrives in Midland via about 400 miles of pipelines.

Texas Commission on Environmental Quality will be reviewing all of Texas' drinking water sources. The source water assessment has been completed and the report will be available this year. It allows us to focus on our source water protection activities.

#### ALL drinking water may contain contaminants.

When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point-of-use devices. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

#### **Secondary Constituents**

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not EPA. These constituents are not causes for health concerns. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

Year	Constituent	Range of Levels	Units
2002	Hardness	448-700	ppm
2002	Chlorides	468-798	ppm

#### **Public Participation Opportunities**

The Midland City Council meets on the 2nd and 4th Tuesday of each month at City Hall, 300 N. Loraine Street, at 10:00 a.m. The Council agenda is posted for public notice at least 72 hours prior to the meetings. To find out whether water issues will be considered at a particular City Council meeting, please call (432) 685-7260.

#### **About The Following Pages**

The pages that follow list all of the federally regulated or monitored constituents which have been found in your drinking water. U.S. EPA requires water systems to test up to 97 constituents.

#### **Definitions**

Maximum Contaminant Level (MCL) - The highest permissible level of a contaminant in drinking water. MCLs are set as close to the Maximum Contaminant Level Goal (MCLG) as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

**Action Level (AL)** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Continued on next page

#### INORGANICS Range of Highest Level At Any Unit of Year Constituent Detected MCL MCLG Source of Constituent Sampling Point Measure Levels Erosion of natural deposits; Runoff from 7.2000-50 0 2002 32.7 Arsenic dqq orchards; Runoff from glass and elec-32,7000 tronics production wastes. Discharge of drilling wastes: Discharge 0.0180-2002 Barium 0.155 2 2 from metal refineries: Erosion of natural mag 0.1550 deposits. Erosion of natural deposits: Water additive 0.3000 -4 2.9 4 2002 Fluoride which promotes strong teeth; Discharge 2.9000 from fertilizer and aluminum factories. Runoff from fertilizer use: Leaching from 0.5500-10 10 4.05 2002 septic tanks, sewage; Erosion of natural Nitrate 4.0500 deposits Runoff from fertilizer use; Leaching from 0.0000-1999 **Nitrite** 0.01 septic tanks, sewage; Erosion of natural mag 0.0100 Discharge from petroleum and metal 17.7000-2002 35.9 50 ppb refineries; Erosion of natural deposits; Selenium 35.9000 Discharge from mines. 304.0000-Erosion of natural deposits; 2002 NA Sodium 519 NA ppm 519.0000 By-product of oil field activity Gross alpha 1.0000-2002 10.3 pci/l Erosion of natural deposits. 0 15 10.3000 adjusted Decay of natural and man-made Gross beta 7.2000-2002 11.4 50 0 pci/l emitters 11.4000 deposits.

NA = MCL not applicable - not regulated. Special Monitoring Requirement.

#### (Continued from previous page)

NTU - Nephelometric Turbidity Units

MFL - million fibers per liter (a measure of asbestos).

pci/I - picocuries per liter (a measure of radioactivity).

ppm – parts per million, or milligrams per liter (mg/l)

**ppb** – parts per billion, or micrograms per liter (µg/l)

ppt – parts per trillion, or nanograms per liter

**ppq** – parts per quadrillion, or picograms per liter.

#### **ARSENIC**

The EPA has revised the drinking water standard for arsenic, a naturally occuring mineral, from 50  $\mu$ g/l down to 10  $\mu$ g/l (1  $\mu$ g/l = 1ppb). This standard will become effective January 2006. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

#### **ORGANICS** -

None Detected Or Not Tested For

#### **COLIFORMS**

What are coliforms?

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Fecal coliform bacteria and, in particular, E. coli, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of fecal coliform bacteria (E. coli) in drinking water may indicate recent contamination of the drinking water with fecal material. The table at the top of the following page indicates total coliform bacteria below MCL's was found in the monthly drinking water samples submitted for testing to the TCEQ last year.

#### **FECAL COLIFORM**

None Detected

# TOTAL COLIFORM

Year	Constituent	Highest Monthly % of Positive Samples	MCL	Unit of Measure	Source of Constituent
2002	Total Coliform Bacteria	0.81	*	Presence	Naturally present in the environment.

<sup>\*</sup> Presence of coliform bacteria in 5% or more of the monthly samples.

# DISINFECTION BYPRODUCTS

Year Constituent Average of All Betected MCL MCLG Unit of Source of Const							Source of Constituent
real	Constituent	Sampling Points	Levels		MeLa	Measure	Source of Constituent
2002	Total Haloacetic Acids	14.1625	0.00- 30.10	60	0	ppb	By-product of drinking water disinfection
2002	Total Trihalomethanes	61.515	0.00- 107.90	100	0	ppb	By-product of drinking water chlorination

# UNREGULATED CONTAMINANTS

Year	Constituent	Average of All Sampling Points	Range of Detected Levels	Unit of Measure	neason for Monitoring
2002- 2002	Chloroform	0.24	0.0000- 0.7000	ppb	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
2002- 2002	Bromoform	25.2	1.0000- 37.0000	ppb	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
2002- 2002	Bromodichloro- methane	2.62	0.0000- 4.3000	ppb	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
2002- 2002	Dibromochloro- methane	10.6	0.0000- 17.0000	ppb	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
2002- 2002	Dibromomethane	0.4	0.0000- 2.0000	ppb	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

# LEAD & COPPER

Year	Constituent	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Constituent
2000	Lead	1.6000	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.
2000	Copper	0.247	0	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

### TURBIDITY

Year	Constituent	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Constituent
2002	Turbidity	0.34	100.00	0.3	NTU	Soil Runoff

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.